REMARKS

The claims remaining in this patent application following amendment are Claims 29 and 32-34. Claims 30, 31 and 35 have been cancelled, without prejudice. Claim 29 has been amended. Claims 11-18 were previously withdrawn.

Claims 29, 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent to Westervelt, et al. (3,872,712) in view of the patent to Oswald, et al. (3,813,922). Claims 31 and 35 have been cancelled and, therefore, the rejection thereof is rendered moot. In making his rejection, the Examiner has noted that Westervelt, et al. discloses a dynamic flow comparator system to test work pieces for leaks. The Examiner acknowledges that Westervelt, et al. does not teach or suggest that the patented system would be used to test the evaporative system of a motor vehicle. Despite this limitation, and since Westervelt, et al. indicates that the patented system could be used to test "any of a wide variety of other items," the Examiner has reached the conclusion that such "other items" would include the evaporative (i.e., fuel vapor recovery) system claimed by the applicants in Independent Claim 29, amended. For the following reasons, it is believed that the Examiner has misconstrued the teachings of Westervelt, et al. as it relates to the applicant's claimed method.

Independent Claim 29 has been amended to indicate that the system to be tested for leaks is the fuel vapor recovery system of a motor vehicle. As will be appreciated by those skilled in the art, such a fuel vapor recovery system creates a potentially volatile and hazardous environment for workmen who will perform the test method. That is to say, because of the proximity of combustible vapors from the vapor recovery system to the test equipment, an accidental spark or flash point generated during testing could ignite an explosion.

To this end, Claim 29 has also been amended to point out that the gas under pressure to be used in performing the applicants' claimed method is a non-flammable (e.g., inert nitrogen or

carbon dioxide) gas. Such a non-flammable gas will not burn and will not support combustion in the potentially hazardous environment within which the test equipment is located and the fuel vapor recovery system is tested. By virtue of the foregoing, an explosion is far less likely to occur than had a flammable gas (e.g., compressed air) been used, such as that which is commonly available in the typical automotive repair shop.

It is the position of the applicants that the flow comparator system described by Westervelt, et al. would not be used by those skilled in the art to test for leaks in a fuel vapor recovery system of a motor vehicle in the manner claimed by the applicants. More particularly, the electrical modules used in the Westervelt, et al. system are shown and described as being powered by 110 volts (see, for example, FIG. 5). Such a relatively high 110 volt operating system like that specifically taught by Westervelt, et al. is known to be unsafe in an explosive environment because of the potential for arcing. Moreover, the cabinet described by Westervelt, et al. is of "monoque construction," such that all of the electrical modules arranged in the same cabinet pose a high risk of explosion should gases from the system under test vent into the cabinet (see, for example, column 2, lines 40-46).

As will be apparent to those skilled in the art, any of the solenoids (e.g., 51, 54 and 56), electrical switches (e.g., 21, 27, 49 and 61), socketed lamps (e.g., 27, 28 and 62) and master relay (CRM) to be used within the same cabinet of Westervelt, et al. could ignite the hydrocarbon vapors and generate an explosion because of the relatively high 110 volt source connected thereto. Consequently, it is highly doubtful that one would choose to use the flow comparator system that is shown and disclosed by Westervelt, et al. in a vapor filled environment to test a fuel vapor recovery system of a motor vehicle for leaks in the manner that is now recited in Independent Claim 29, amended.

The additional fact that Westervelt, et al. employs compressed air (which contains combustible oxygen) for test purposes (from air supply inlet 36) is further reason to believe that the Westervelt, et al. flow comparator system would not be desirable to test a fuel vapor recovery system for leaks in a hazardous environment without subjecting workmen to the unnecessary risk of an explosion. Thus, despite Westervelt's, et al. oblique reference to "a wide variety of other items," there is absolutely no logical reason to conclude that Westervelt, et al. had intended or contemplated that the patented system was to be used to test for leaks in the fuel vapor recovery system of a motor vehicle as has otherwise been suggested by the Examiner. Accordingly, and regardless of the teachings of a ball detector by Oswald, et al., it is submitted that the applicants' method for testing for leaks in the fuel vapor recovery system of a motor vehicle by means of a moving ball gas flow meter in a gas supply line connected to a source of non-flammable gas as recited in Independent Claim 29, amended, is patentable over any reasonable combination of Westervelt, et al. in view of Oswald, et al.

Nevertheless, it is pointed out that the pressure drop across the laminar flow element 17 of Westervelt, et al. must be sensed and amplified as part of the patented dynamic leakage flow instrument. With the moving ball type flow meter claimed in the applicants' method, neither a pressure drop nor the actual reading or numerical equivalent of flow rate is important. Therefore, a number scale is not even required to practice the claimed method. What is necessary to the applicants' method is the ability to be able to manually make a visual comparison of the positions of the moving ball when the applicants' flow meter is first connected to the leak tolerance standard and subsequently connected to the fuel vapor recovery system under test. In this same regard, a substitution, as proposed by the Examiner, of the ball detector of Oswald, et al. for the laminar flow element of Westervelt, et al. would require significant operational and electrical changes that would require a reinvention of Westervelt, et al.

Hence, and in view of the foregoing, it is once again submitted that the applicants' method as recited in Independent Claim 29, amended, is patentable over any reasonable combination of the teachings of Westervelt, et al. with the teachings of Oswald, et al. Inasmuch as Independent Claim 29 is believed to be patentable, Claims 32-34, which depend therefrom, are likewise believed to be patentable.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over the aforementioned patent to Westervelt, et al. in view of the aforementioned patent to Oswald, et al. in further view of the patent to Adams (4,462,249). Claim 33 is dependent from Independent Claim 29. Inasmuch as Independent Claim 29, amended, is believed to be patentable, Claim 33, which depends therefrom, is likewise believed to be patentable. Nevertheless, although Adams indicates that nitrogen and other inert gases may be pumped into a fuel filled storage tank to initiate bubbles indicative of a leak site, it is pointed out that the storage tank is located underground. Thus, the leakage of fuel vapors from such an underground fuel storage tank does not pose a clear and present risk. Not only is the nitrogen/inert gas of Adams used for an entirely different purpose than the applicants' claimed non-flammable gas, but the reasons of Adams for using such gas are not the same as the reasons of the applicants for their use of a non-flammable gas.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over the aforementioned patent to Westervelt, et al. in view of the aforementioned patent to Oswald, et al. in further view of the patent Toback (3,822,585). Claim 34 is dependent from Independent Claim 29. Inasmuch as Independent Claim 29, amended, is believed to be patentable, Claim 34, which depends therefrom, is likewise believed to be patentable.

In view of all of the foregoing, it is submitted that each of Claims 29 and 32-34 remaining in this patent application recites a patentable method. Thus, reconsideration of the Examiner's final rejection is requested and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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CERTIFICATE OF MAILING

I, Paulette A. Fritz, do hereby certify that the foregoing documents are being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Box: No Fee Amendment, Commissioner for Patents, P. O. Box 1450 Alexandria, VA 22313-1450 on this date of February 10, 2005.

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